Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the matter of	)	
Improving Public Safety Communications In the 800 MHz Band	)	WT Docket No. 02-55
Consolidating the 900 MHz Industrial/ Land Transportation and Business Pool Channels	)	

COMMENTS

Aeronautical Radio, Inc. ("ARINC"), by its attorneys, hereby submits comments in response to the Commission's Notice of Proposed Rulemaking, released March 15, 2002 (FCC 02-81).

ARINC is a member of the Private Wireless Coalition and fully supports the comments submitted by this Coalition. In addition, ARINC wishes to underscore the needs of aviation for high quality land mobile communications at the nation's airports. ARINC currently provides trunked radio facilities using 800 MHz technology at seventeen of the nation's airports. Individual airlines have trunked 800 MHz systems at other airports. ARINC and the airlines are investing millions of dollars in converting these facilities from analog to higher efficient digital systems using Motorola's iDEN technology. This industry is making these substantial investments to meet the sharply increased communications traffic at our nation's airports ensure the security and convenience of that the traveling public demands and to support new digital applications for safety and security.

ARINC and the air transport industry wish to emphasize that

- A robust, safe, and efficient air transportation system is critical to the economy of the United States;
- Enhanced land mobile communications at our airports are vital for the safety and efficiency of that air transportation system;
- The quality of service in terms of coverage and availability exceeds that available from wide area commercial service providers; and
- Relocation of these vital airport systems out of the 800 MHz band is not possible because the equipment is not available today.

Of the nations of the world, the United States is uniquely dependent upon air transportation to carry high value cargo and to transport people over large distances within the United States and between the United States and other countries. Almost 40% of the world's air travel originates or terminates in the United States. In 2001, 615 million passengers were enplaned by the airlines notwithstanding the disruption to the system by the events of September 11, 2001.[1] In March 2002, U.S. scheduled air carriers carried 1.9 billion revenue-ton-miles of mail, freight, and express cargo.[2] This cargo represents a significant portion of the U.S. gross domestic product and contributes to this nation's high productivity and international competitiveness. One economist estimates that the total impact of U.S. aviation on our nation's economy amounted to $976 billion in 1998.[3] Aviation is part of this nation's critical infrastructure and is vital to this nation's economy and security.[4]

Since its creation in 1929, ARINC has provided a system of air ground air radio communications facilities throughout the United States to ensure the safe and efficient transit of aircraft in flight. As air traffic grew in numbers of flight operations, in numbers of passengers handled, and in amounts of cargo carried, the air terminal functions became more complicated

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[1] Air Transportation Association Data at http://www.airlines.org/public/industry/bin/outlook/pdf.
[2] ATA Monthly Cargo Traffic Report available at http://www.airlines.org/public/industry /display1.asp?nid=1038.
[3] W. Smith, Economic Impact of Civil Aviation at 3, http://www.airlines.org/public/industry/bin/WilburSmith.pdf.
[4] *See, e.g.* E.O.13231 (October 16, 2001), 66 Fed Reg. 53061; E.O.13228 (October 8, 2001), 66 Fed. Reg. 51812.

and airports covered larger areas. This increased complexity of aviation terminal operations led ARINC to secure licenses in the 800 MHz band for cooperative shared trunked systems, and a number of individual airlines also established their own systems. These new systems did not require wide-area coverage; rather, they operate over have limited service areas, requiring a service radii of 3 to 10 miles centered on an airport. However, these limited area services must be engineered to handle high levels of traffic, high peak to average loads, and high availability.. At the nation's busiest air terminals, more than 100,000 people may visit every day. ARINC and the airlines used the trunked 800 MHz systems to provide an effective means of communications among controllers, aircrews, ground support personnel, and security personnel, with immediate access and without interference. As a result of this capability, airports and airlines gained better operating efficiency, reduced aircraft turnaround time at the gates, more on time departures and arrivals, and increased security.

These facilities operated ARINC and individual airlines have become indispensable for safe and efficient ground operations at the nation's airports. With heightened security in the wake of September 11, 2001, we have seen numerous occasions where airports have been evacuated. Coordination of the safe and rapid evacuation and rescreening of passengers is a monumental task that requires communications provided by these trunked systems. Jet refueling requires that workers be assured of instant access to a radio channel for their safety and the safety of the people around their aircraft. Aircraft and airport maintenance is coordinated over these land mobile channels. Baggage and freight must be screened and loaded on the correct airplane, and now that positive bag matching has been extended to domestic flights, as well as international flights, airlines require mobile data communications provided by ARINC's iDEN-based 800 MHz service to insure that all baggage loaded is matched to a passenger onboard the aircraft. Mechanical emergencies and wheel chair requests must also be accommodated. In short, safety and convenience of the traveling public depends upon the availability on the airports of a high quality, high capacity communication system.

The experience of the aviation industry has been that the services offered by commercial

mobile service providers simply do not meet the required level of availability and priority and coverage required by aviation. Airports are complex operations. Radio coverage must extend to outlying hangers, throughout the terminals, into the baggage handling areas, and to gate and aircraft holding areas. Coverage can be a problem. Availability and delay is another high hurdle for aviation. ARINC engineers these shared 800 MHz systems to deliver an availability of 99.9% and with a delay of no greater than 30 seconds during peak hub operations. ARINC also provides a guaranteed turnaround time of four hours for repairs on the system, 24 hours a day, 365 days a year. Airlines have found commercial service providers unwilling or unable to provide the level of service required. To meet aviation's requirements with assurance, members of this industry prefer to obtain service from facilities that they directly own or facilities owned by a company that they directly control.

Aviation cannot be moved out of the 800 MHz band because equipment is not available today, because aviation is increasingly relying on digital technology, such as Motorola's iDEN system. Motorola does not currently have an iDEN product that operates at 900 MHz or 700 MHz. Thus, a decision that would require moving the airline systems out of the 800 MHz band would be in effect a denial of service. While it is true that Motorola has plans an iDEN product for the 900 MHz band (but not 700 MHz), this product will require doubling the 12.5 kHz channel spacing in the 900 MHz channels so that these 900 MHz channels can function as 25 kHz channels—twice as many channels would be required to handle the same levels of traffic in the 900 MHz band. At best, the cost would be prohibitive; at worst, the air transportation industry would simply not be able to get the service that it needs.

The public interest would not be served by punishing a critical infrastructure industry, like aviation, that has undertaken to improve the spectral efficiency of its systems to accommodate growing demand. Implementation of digital technology is expensive, but it will enable aviation to continue to conduct safe and secure operations. A significant investment and ongoing financial commitment has already been made by aviation to provide needed increases in the capacity of airport trunked systems with no increase in spectrum. The FCC should be

encouraging aviation to continue this effort rather than suggesting that these investments might be rendered worthless by a decision in this rulemaking.

Aviation did not create the problem. Aviation will work with any affected user to ensure interference-free operation by other users of this spectrum. However, moving out of the 800 MHz band is neither fair nor reasonable and any such decision would seriously impair the safety, security, and efficiency of United States aviation. ARINC and the air transport industry urge the FCC to adopt the Private Wireless coalition plan. Aviation land mobile systems should not be forced out of the current 800 MHz band nor should they operate on anything other than a protected, primary basis.

Respectfully submitted,

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